

# EXHIBIT 53



# Google Ad Exchange Dynamic Allocation

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Ad Exchange Academy  
September 2013

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# Welcome

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Google

**Shilpa Maniar**

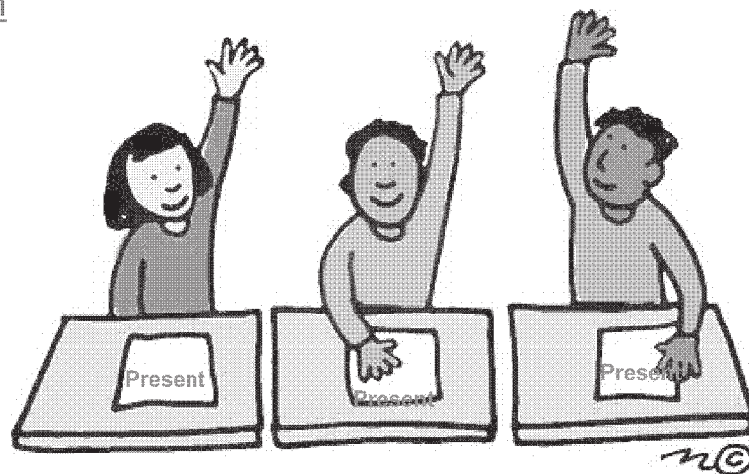
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Please mark your attendance at [go/iamhere](https://go/iamhere)

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## Agenda

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- Dynamic Allocation - Overview
- Dynamic Allocation - How does it work?
- Dynamic Allocation - Quiz

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# Dynamic Allocation

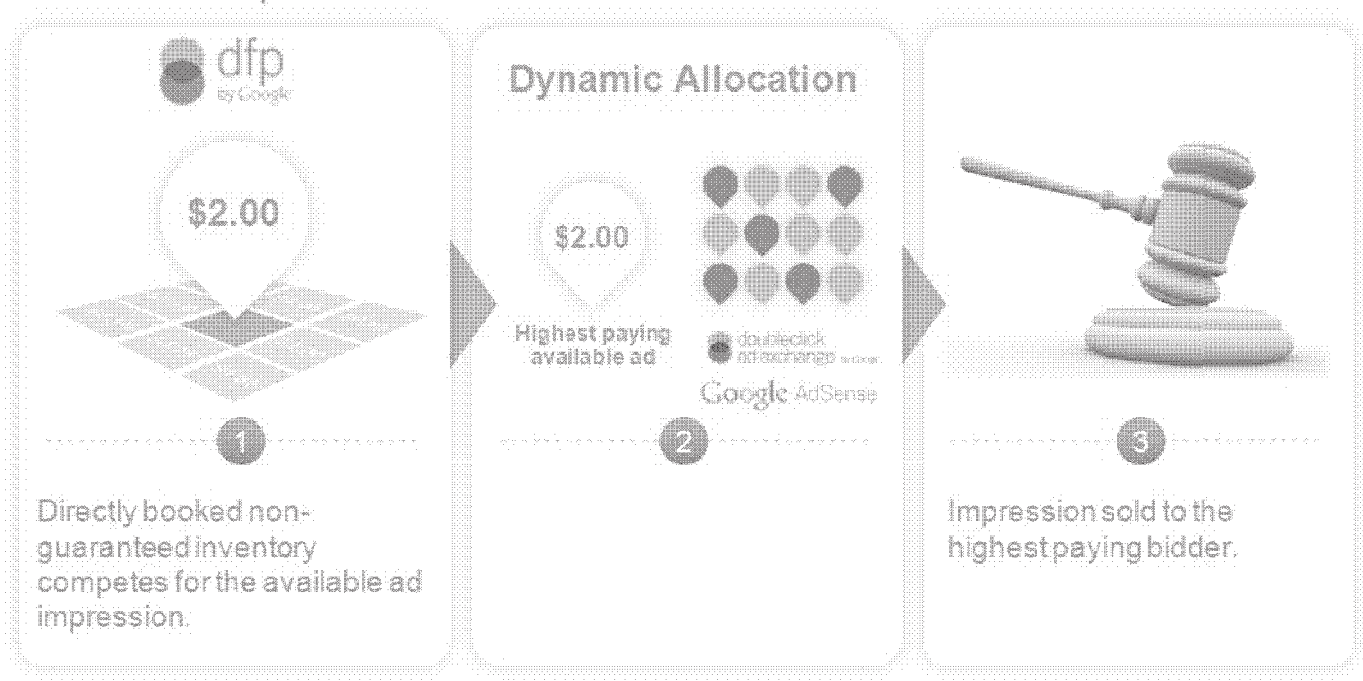
## Overview

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## Dynamic Allocation

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- DFP integration drives yield through real-time competition
- This incremental revenue is a result of simply by plugging AdX into your current DFP setup



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## Dynamic Allocation at Work in the Marketplace

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Globally, the Ad Exchange beats competing direct and indirect sales channels including other networks and backfills over a third - 34% - of the time.

In these instances when the Ad Exchange won out over the alternatives, the revenue it achieved for that inventory was on average 86% higher than it would have been if the Ad Exchange not been used.

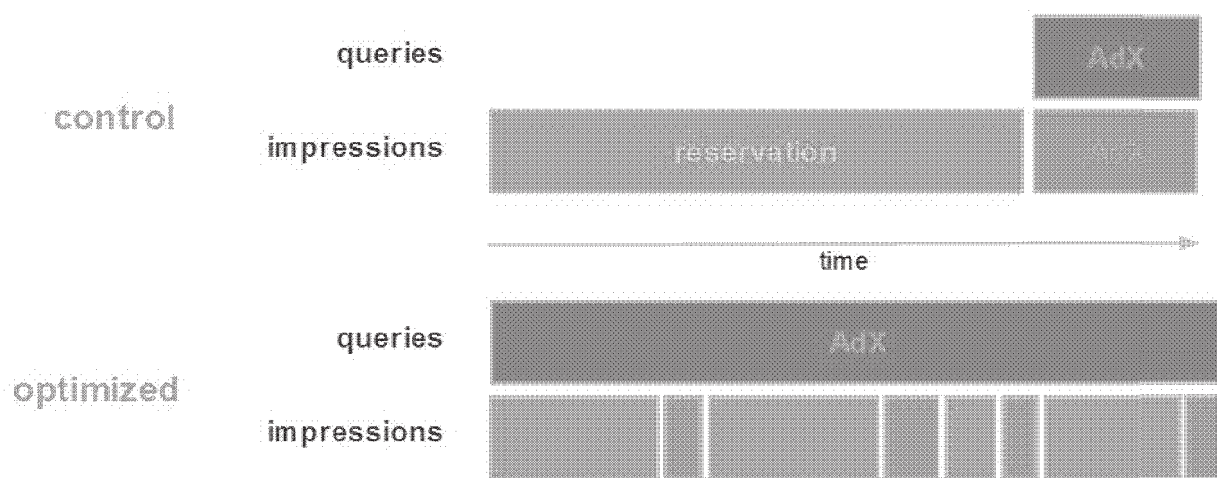
This translates to an average overall revenue lift of 25%.

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## Cross-Priority Dynamic Allocation

Google



- call AdX for every reservation impression and use the reserve price to control how often we expect AdX to fill the impression
- increase eCPM without compromising reservations

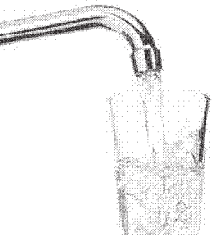
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## Dynamic Allocation

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### Filling remnant inventory

- Without blocks or pricing floors, AdX has a 99%+ fill rate

### Ad Serving Costs

- Unlike other remnant providers, DFP will only serve AdX if there is an ad to be served

### Through Real Time Competition

- Higher eCPMs
- Eliminate guesswork and manual prioritization of networks by publisher because the booked DFP rates and AdX rates are known for every impression served



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# Dynamic Allocation

How does it Work?

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## What is Dynamic Allocation?

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**Dynamic Allocation** generates, in **real time**, the highest possible return for every **impression** by allocating it to the sales channel (e.g., DFP or Ad Exchange) that pays the most subject to constraints set by the seller.

This **yield maximization** feature between DFP/XFP and AdX sets a dynamic floor where an AdX ad only serves if the price can beat the campaigns directly booked at the **same priority** setting or **below** it.

No ad is "allocated" to AdX as it would be for a standard direct campaign or network deal.

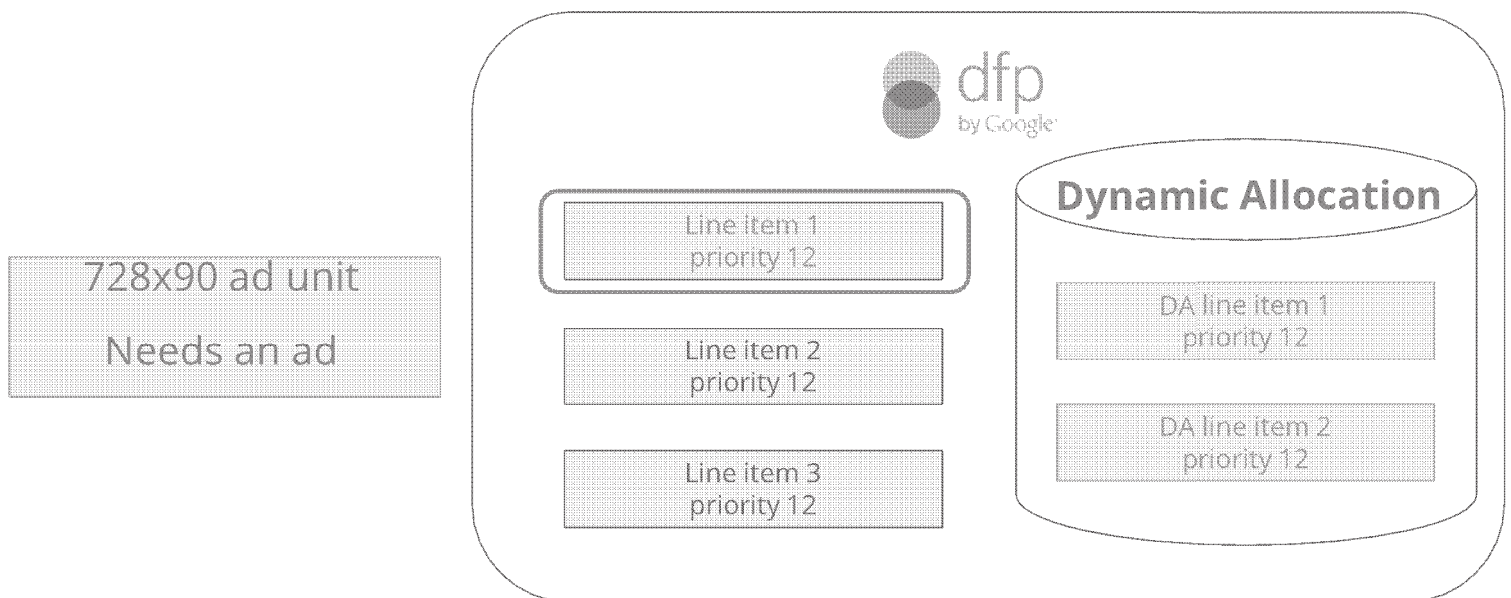
- The **integration** between DFP/XFP and AdX is that the two systems are dynamic; if AdX cannot fill an impression (for example, there are no winning bids) then DFP/XFP simply ignores it and serves what it would have otherwise served.
- If AdX returns a winning bid, it will only serve if the returned CPM is either the **same** or **exceeds** the value set for other ads AdX is eligible to compete against.

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## Dynamic Allocation - How does it work?

Google

1. A ad impression becomes available. As usual, DFP uses its targeting signals to find matching line items.
2. DFP identifies any matching dynamic allocation line items at the same or lower numerical priorities as the DFP ad selected in step one.

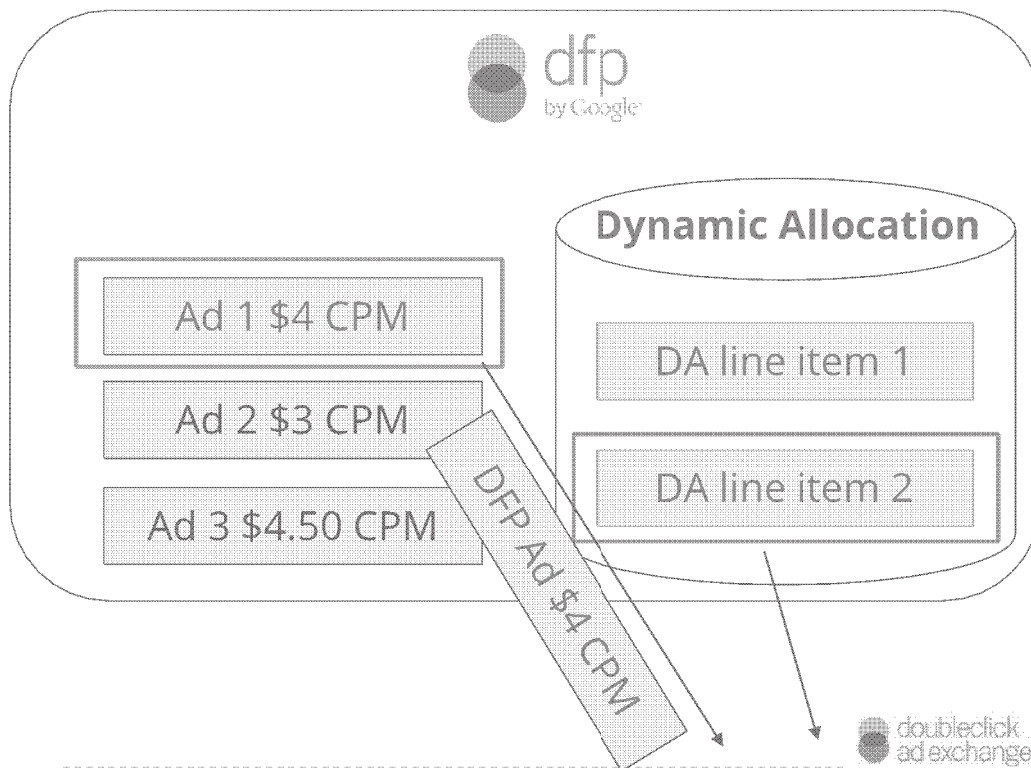


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## Dynamic Allocation - How does it work?

Google

3. Once DFP has chosen a line item, it then selects the best creative.



4. From the DA bucket, DFP **randomly** selects a DA line item, triggering an AdX auction. The CPM of the DFP-booked creative is passed over to AdX.

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# Dynamic Allocation - How does it work?



5. Ad Exchange finds all eligible ads, then runs its auction to determine a winner. The highest bidder wins.  
Furthermore, the passed-in DFP price acts as a price floor for the auction. Any bids lower than it are thrown out.

*Note: all AdX prices are **net** (post revenue-share)*



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## Dynamic Allocation - How does it work?

Google

6. The AdX auction winner's bid is compared to the DFP booked price to determine the dynamic allocation winner. No matter what happens next, this is the buyer/ad that will serve to the publisher's site.

In other words: the system *dynamically allocates* the impression to either the DFP booked buyer or AdX, depending on which will yield more.



If the DFP ad is higher, it wins the impression. If the AdX ad is higher... (see next step)

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# Dynamic Allocation - How does it work?



8. If the Ad Exchange ad is chosen, the system must determine the **second price\*** for the buyer to pay.

The system will find the highest second price it can. It will compare the second-highest bid from AdX with the DFP booked price, and the higher of the two will serve as the second price.

AdX Buyer E: \$7.50

AdX Buyer A: \$6.50

*Second-highest bid from the AdX auction*

DFP Ad \$4 CPM

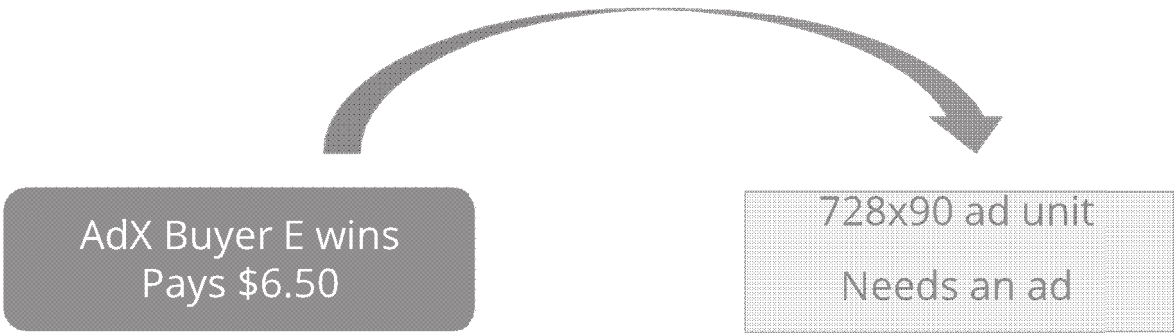
NEW SECOND PRICE

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# Dynamic Allocation - How does it work?



9. AdX Buyer E wins the impression **at a price of \$6.50**. Buyer E's ad creative serves to the page.



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# Dynamic Allocation

How does it Work with XFP?

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## Ad Types & Priorities in DART and XFP

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Priorities (a reminder):

double  
click dfp

8	Standard
4	Sponsorship
12	Bulk
12	Weight-Based Bulk
12	Time-Based Bulk
16	Network Promotional

dfp  
by Google

4	Sponsorship
8	Standard
12	Network
12	Bulk
12	Price priority
16	House
12	Ad Exchange

- The default AdX priority in **DART** is **10**, whereas in **XFP**, the AdX default priority is **12**.
- In XFP, priorities **1 to 11** are considered **non-remnant**, and priorities **12 to 16** are considered **remnant**.
- When ads are imported into XFP, the AdX priority is not changed. As a result, AdX line items set to the default of 10, or those that have been changed to less than 10, are imported into XFP at a priority that is considered "non-remnant."
- Unless this setup is modified, in many cases, AdX will not be **called\*** in the same way it had been in DART.

\*keep in mind the distinction between the terms "called" and "served". The scenarios discussed ensure AdX is **called** when the customer wants it to be. This does not mean that an AdX ad will be **served** every time a call out is made to AdX. AdX will still have to compete and "win" the auction and dynamic allocation.

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## How Dynamic Allocation Works in XFP

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- Ad Server considers priority, delivery goal types, a score, and whether the ads being considered have a priority that falls in a remnant or non-remnant bucket.
- In order to determine whether an AdX call out is made, DA and non-DA ads are ranked separately, then ranked against each other.
  - If the priority of the ads is in the **non-remnant bucket**, both **delivery type and priority are considered** during this comparison by calculating a “**score\***.” AdX will only be called if the DA ad has a score that is greater than or equal to the non-DA ad.
  - If the priority of the ads is in the **remnant bucket**, **delivery type is ignored** and only **priority is considered** during this comparison. AdX will be called as long as the priority of both ads is in the remnant bucket and the numeric priority value of AdX is less than or equal to the non-DA ad.

\* **Score** is calculated using ad priorities so that more important ads and goal-based ads have a higher score. The importance of delivery type for ads in the non-remnant bucket is reflected by a “fudge factor” so that goal-based ads have a higher score than ads with no delivery goal. This fudge factor is one of the factors that helps to prevent under-delivery of goal-based ads.

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## XFP Ad Serving Logic (Non-Remnant)

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### Priorities 1 to 11

- XFP was built to mitigate the risk of under delivery. Therefore, ads with delivery goals, such as Standard ads, are favored over those with no goals, such as AdX ads. When comparing an AdX line item to a guaranteed line item, DART looked at priority alone. Because AdX could preempt the guaranteed line item, in many cases, competing guaranteed line items would under-deliver.
- XFP considers several factors, such as priority and the delivery goal type of the competing ads. The importance of delivery type for ads in the non-remnant bucket is reflected by a “fudge factor” so that goal-based ads have a higher score than ads with no delivery goal. This fudge factor is one of the factors that helps to prevent under-delivery of goal-based ads.

### Delivery type and priority matter

- If the score of the winning non-DA line item is higher than that of DA line item, then a call out is not made to AdX. Thus, in the non-remnant bucket, DA ads can only compete with unlimited ads (e.g. Price Priority) or non-DA ads of a higher (numeric) priority.

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## XFP Ad Serving Logic (Remnant)

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### Priorities 12 to 16

#### **Delivery type ignored, only priority considered**

- If the priority of the DA line item is greater than or equal to 12, and the competing ads are the same as, or at a higher numerical priority than the AdX ad, a call out is made to AdX.

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How to calculate the score?



**Score calculation:** 1600 – priority(100) + fudge

LI Type	Sponsorship	Standard	Network	Bulk	Price Priority	AdX/AdS	House
Priority	4	6,8,10	12	12	12	12	16
Delivery Goal Type	%	Absolute	%	Absolute	Un-limited	Un-limited	%
Fudge Factor	F=60	F=40	F=60	F=40	F=0	F=0	F=60
	Non-Remnant		Remnant				
	Paying						Non-Paying

For example, the score for a Standard ad with a priority of 9 would be:

(1600 - 900 + 40) = 740

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## Ad Exchange Highlights

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- AdX is a Yield Management solution that provides a real time open marketplace
- Based off of a 2<sup>nd</sup> price auction
- Ad Exchange ad type must be selected in DFP/XFP to enable Dynamic Allocation
- Fudge Factor is taken into consideration for non-remnant line items in XFP
  - More information on Dynamic Allocation in XFP: [go/dasetup](https://www.google.com/adwords/learningcenter/articles/dynamic-allocation-in-xfp/)
- Live CPM will truly reflect the CPM of other Ad Networks/Exchanges
- AdX UI is going to be changing from Ad Unit methodology to Rules and Inventory

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# Dynamic Allocation

## Quiz

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# Dynamic Allocation Quiz



Quiz at [go/adx-da-quiz](https://go/adx-da-quiz)

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Thank You!

Questions?

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Notes Summary:

Slide 2: 'Hi Everyone - Thank you for joining the training.'  
Slide 5: 'Hi Everyone - Thank you for joining the training.'  
Slide 6: 'Hi Everyone - Thank you for joining the training.'  
Slide 7: 'Hi Everyone - Thank you for joining the training.'  
Slide 8: 'Hi Everyone - Thank you for joining the training.'  
Slide 10: 'Hi Everyone - Thank you for joining the training.'  
Slide 11: 'Hi Everyone - Thank you for joining the training.'  
Slide 12: 'Hi Everyone - Thank you for joining the training.'  
Slide 13: 'Hi Everyone - Thank you for joining the training.'  
Slide 14: 'Hi Everyone - Thank you for joining the training.'  
Slide 15: 'Hi Everyone - Thank you for joining the training.'  
Slide 16: 'Hi Everyone - Thank you for joining the training.'

#### Notes Summary:

Slide 18: 'The DoubleClick Ad Exchange is a real-time marketplace to buy and sell display advertising space.

By establishing an open marketplace where prices are set in a real-time auction, the Ad Exchange enables display ads and ad space to be allocated much more efficiently and easily across the web. It's just like a stock exchange, which enables stocks to be traded in an open way

Who participates in the Ad Exchange?

Again, imagine the Ad Exchange as a stock exchange. Only the largest brokerage houses actually plug into, say, the NYSE. In the Ad Exchange world, those are:

- The large online publishers (sellers)—websites like portals, entertainment sites and news sites
- Ad networks and agency holding companies that operate networks (buyers)—companies that connect web sites with advertisers.

But it's not just the direct participants who benefit. As an individual investor, you can buy and sell shares on the stock exchange through an online broker, without needing to plug in to the

## Notes Summary:

NYSE mainframe. It's the same for AdWords advertisers and AdSense publishers who get access to the extra publishers and certified ad networks in the Ad Exchange, through their AdWords or AdSense interface. Similarly, advertisers who use other participating ad networks can get the benefits of the Ad Exchange.

What does the Ad Exchange mean for the display advertising ecosystem?

Sellers in the Ad Exchange:

- Can make the most money for their ad space, every time a page on their site loads with an ad (called an "impression"). In the past, too many sellers had inventory unsold or sold for a price below its potential market value.
- Get access to many more advertisers, while still being able to control who can advertise on their site.
- Benefit from simplified reporting and payments—a single exchange manages it all.

Buyers in the Ad Exchange:

- Get access to many more websites and more ad space.
- Can use technology that allows them to bid for ad space in real time, depending on how much they value a particular ad impression.

Notes Summary:

- Have more controls over where their ads run and don't run.

Google AdWords advertisers:

- Have easy access to the websites in the Ad Exchange, as well as all the existing websites in the Google Content Network—all through their AdWords interface.

Google AdSense publishers:

- Have their ad space available to certified ad networks in the Ad Exchange. This means more quality display advertisers competing for their ad space and higher returns. AdSense publishers get the benefit of this through their AdSense interface, without having to log in to the Ad Exchange itself.'



Notes Summary:

Slide 19: 'When comparing DA and non-DA ads, the ad server considers priority, delivery goal types, a score, and whether the ads being considered have a priority that falls in a remnant or non-remnant bucket. In order to determine whether an AdX/Adsense call out is made, DA and non-DA ads are ranked separately, then ranked against each other. If the priority of the ads is in the non-remnant bucket, both delivery type and priority are considered during this comparison by calculating a "score\*." AdX will only be called if the DA ad has a score that is greater than or equal to the non-DA ad. If the priority of the ads is in the remnant bucket, delivery type is ignored and only priority is considered during this comparison. AdX will be called as long as the priority of both ads is in the remnant bucket and the numeric priority value of AdX is less than or equal to the non-DA ad'

Notes Summary:

Slide 20: 'When comparing DA and non-DA ads, the ad server considers priority, delivery goal types, a score, and whether the ads being considered have a priority that falls in a remnant or non-remnant bucket. In order to determine whether an AdX/Adsense call out is made, DA and non-DA ads are ranked separately, then ranked against each other.

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If the priority of the ads is in the remnant bucket, delivery type is ignored and only priority is considered during this comparison. AdX will be called as long as the priority of both ads is in the remnant bucket and the numeric priority value of AdX is less than or equal to the non-DA ad'

Notes Summary:

Slide 21: 'When comparing DA and non-DA ads, the ad server considers priority, delivery goal types, a score, and whether the ads being considered have a priority that falls in a remnant or non-remnant bucket. In order to determine whether an AdX/Adsense call out is made, DA and non-DA ads are ranked separately, then ranked against each other.

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Slide 23: 'Ad exchanges address a lot of gaps that we've discussed so far. We'll look at those when we talk about the doubleclick ad exchange'

Slide 25: 'Hi Everyone - Thank you for joining the training.'